CHAPTER 2
STUDY AREA

2.1 BACKGROUND

The City of Chula Vista is located in southwestern San Diego County, approximately seven miles north of the International Border with Mexico. Chula Vista is bordered by National City to the north, San Diego Bay to the west, the City and County of San Diego to the south and the County of San Diego to the east. The study area includes all developed and undeveloped area within the City's municipal boundary as well as lands within the County of San Diego unincorporated area east of the City within the Otay Ranch General Planning Area, which is in the City's sphere of influence.

Topographically, the study area varies considerably. The central portion of the City, bounded by San Diego Bay to the west and the Interstate 805 freeway to the east, is characterized by generally level terrain and ranges in elevation from sea level to 30 feet. From Interstate 805 to the easterly study area boundary located east of Lower Otay Reservoir, the topography varies from gently rolling to steeply sloped with elevations ranging from a low of 200 feet to a high of about 900 feet.

The current population of the City is estimated to be 224,003 as determined by the San Diego Association of Governments (SANDAG). SANDAG forecasts the population of the City in year 2020 to be nearly 300,000 people, an increase of almost 50 percent from the current census. For purposes of this study, existing land uses within the study area are categorized as single-family residential, multi-family residential, commercial, industrial, institutional, parks and vacant land. Table 2-1 and Figures 2-1 and 2-2 show the existing land uses within the study area.

Table 2-1
City of Chula Vista Existing Land Use

Land Use	Units[1]	
Single-family Residential	40,924	Dwelling Units
Multi-family Residential	4,025	Dwelling Units
Commercial	1,508	Acres
Industrial	733	Acres
Institutional	1,423	Acres
Park	1,896	Acres
Vacant / Open Space	18,649	Acres

[1] Unit counts based on City GIS parcel database.

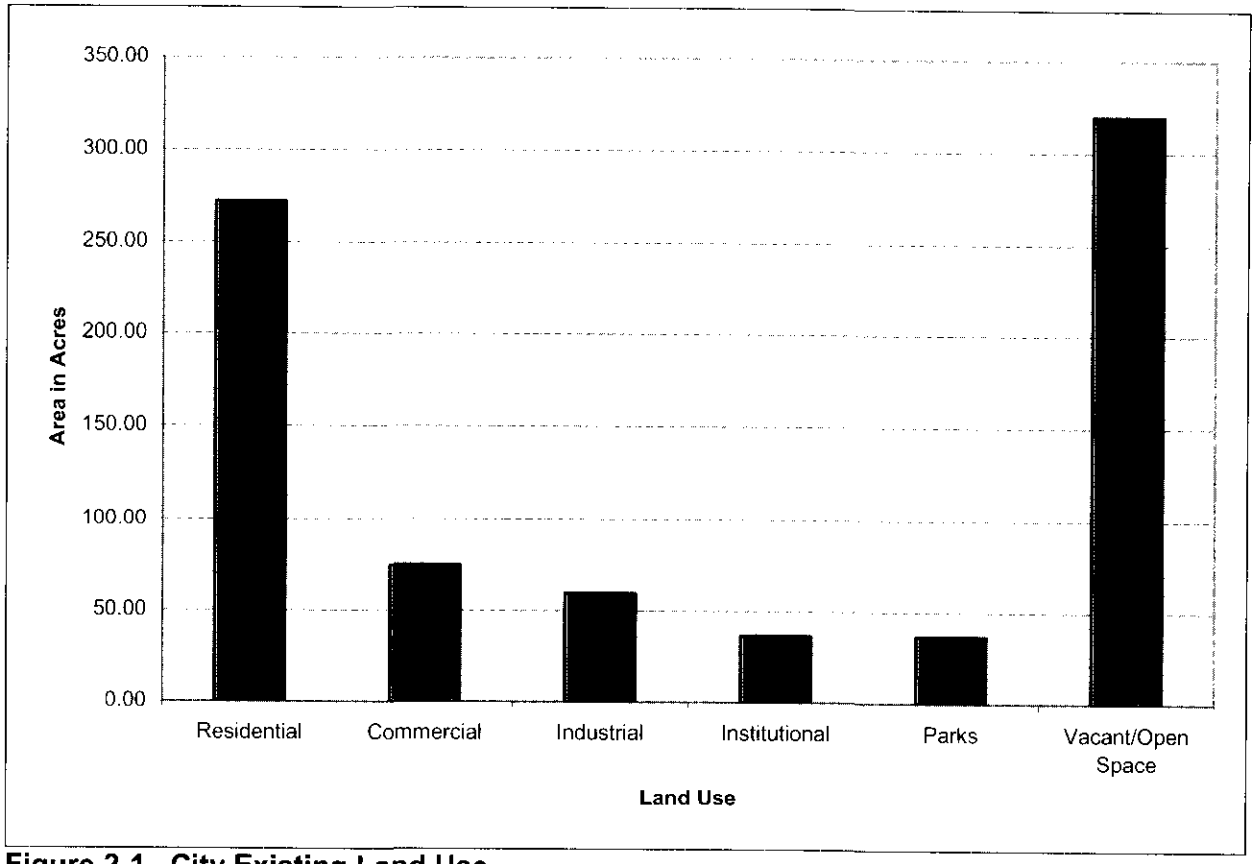
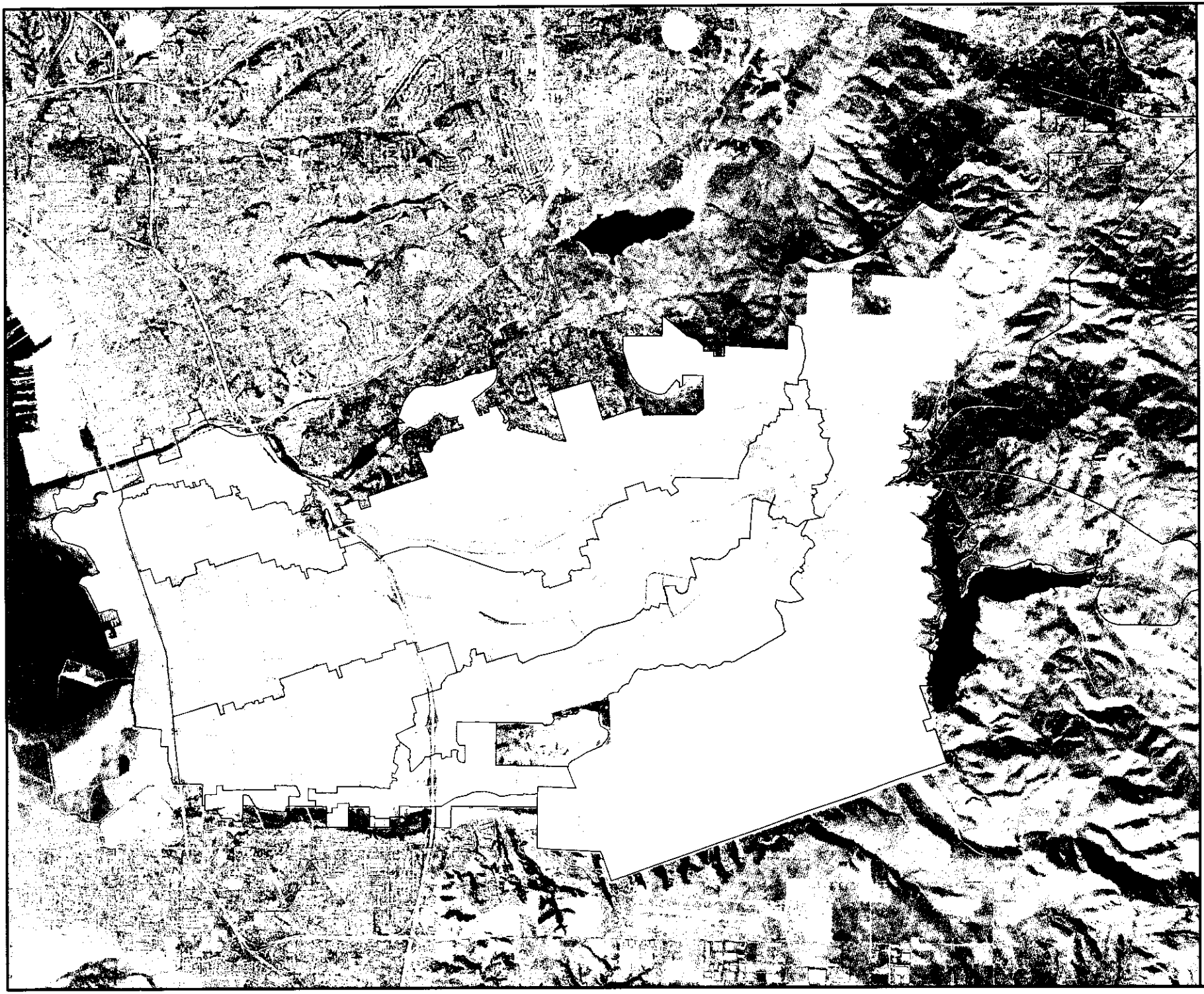


Figure 2-1. City Existing Land Use

2.2 SEWER BASINS

Introduction

Generally based on existing topography, the City's collection system is divided into eight sewer drainage basins referred as the Bayfront, G Street, Telegraph Canyon, Main Street, Date-Faivre, Sweetwater, Poggi Canyon, and Salt Creek Sewer Basins. With the exception of the Sweetwater Basin, all of the sewer basins drain westerly to connections to the South Metro Interceptor located just west of Interstate 5. The South Metro Interceptor, a regional transmission facility owned, operated, and maintained by the City of San Diego Metropolitan Wastewater Department (METRO), conveys flows northward to the Point Loma Treatment Plant. Flows generated in the Sweetwater Basin drain northerly to connections to the County of San Diego's Spring Valley Interceptor located in the Sweetwater River Valley. Figure 2-3 shows the basin boundaries. The following sections describe each of the sewer basins.



CHULA VISTA MASTER PLAN

EXISTING LAND USES

Figure 2-2

Legend

Sewer Basins

City Land Use Types

- Single Family
- Multi Family
- Commercial
- Industrial
- Institutional
- Parks
- Vacant

N

W E

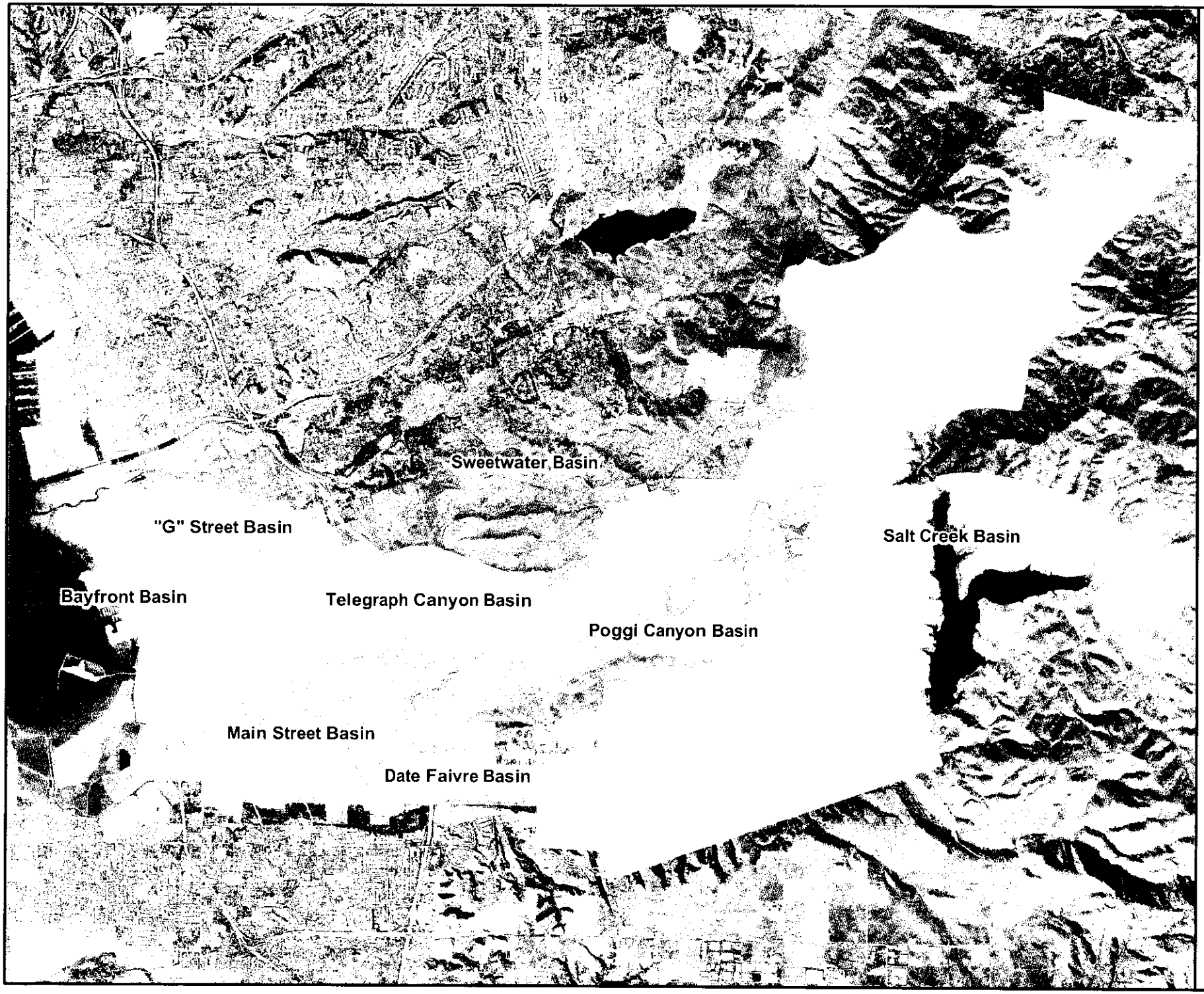
S

1 inch equals 1.5 miles

CITY OF CHULA VISTA

PBS

Note: Land Use Data current as of 2001.
Does not show all existing developments in Eastern Chula Vista



CHULA VISTA MASTER PLAN

BASIN BOUNDARIES

Figure 2-3

Legend

Sewer Basins

- "G" STREET BASIN
- BAYFRONT BASIN
- DATE FAIVRE BASIN
- MAIN STREET BASIN
- POGGI CANYON SUB-BASIN
- SALT CREEK BASIN
- SWEETWATER BASIN
- TELEGRAPH CANYON BASIN

N
W E
S

1 inch equals 1.5 miles

CITY OF CHULA VISTA

PBS

Bayfront Basin

The Bayfront Sewer Basin extends from Interstate 5 westerly to the San Diego Bay shoreline. Land uses within the basin include industrial and commercial development; nearly one-half of the basin is currently undeveloped. The basin also includes marine facilities that sewer to San Diego Port Authority owned sewers which in turn connect to the Chula Vista collection system. Existing land uses within the basin are shown in Figure 2-4.

Basin sewers drain generally easterly to one of six connections to the South Metro Interceptor. One City-owned pump station, referred to as the G Street Pump Station, is located within the Basin adjacent to the Goodrich Aerospace Aerostructures facility at G Street and Marina Parkway.

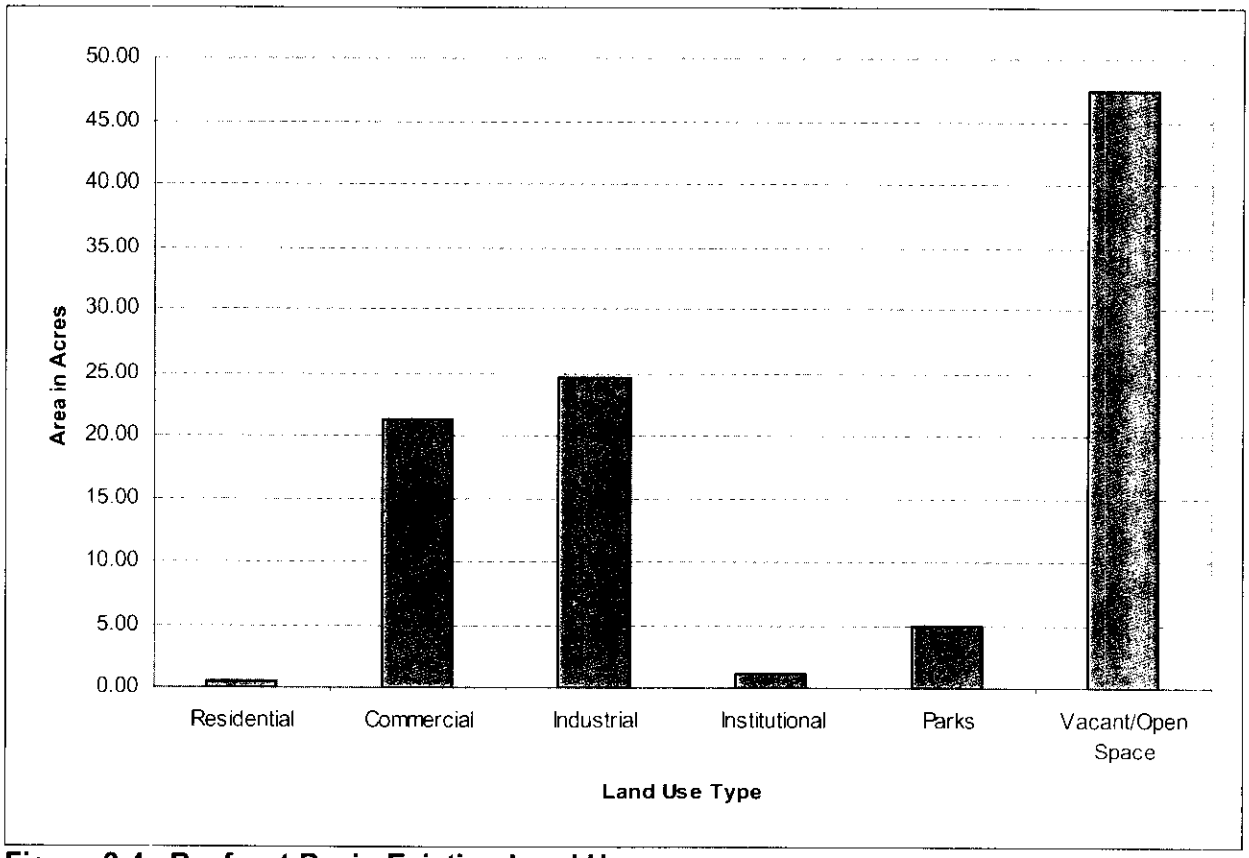


Figure 2-4. Bayfront Basin Existing Land Use

G Street Basin

The G Street Sewer Basin is located in the northwestern portion of the City and is bounded by Interstate 5 to the west and approximately Interstate 805 to the east. The Sweetwater Basin lies north of the basin and the Telegraph Canyon Basin is located to the south. Development within the basin is largely built-out, characterized predominately by residential land uses. Basin land use is summarized in Figure 2-5.

Sewer mains within the basin generally drain to the G Street Trunk Sewer, which ranges in diameter from 10 to 18 inches and includes reaches of parallel mains between Third Avenue and Broadway. The trunk sewer connects to the South Metro Interceptor just west of Interstate 5. Flows from the basin are metered upstream of the connection by METRO meter station CV-3.

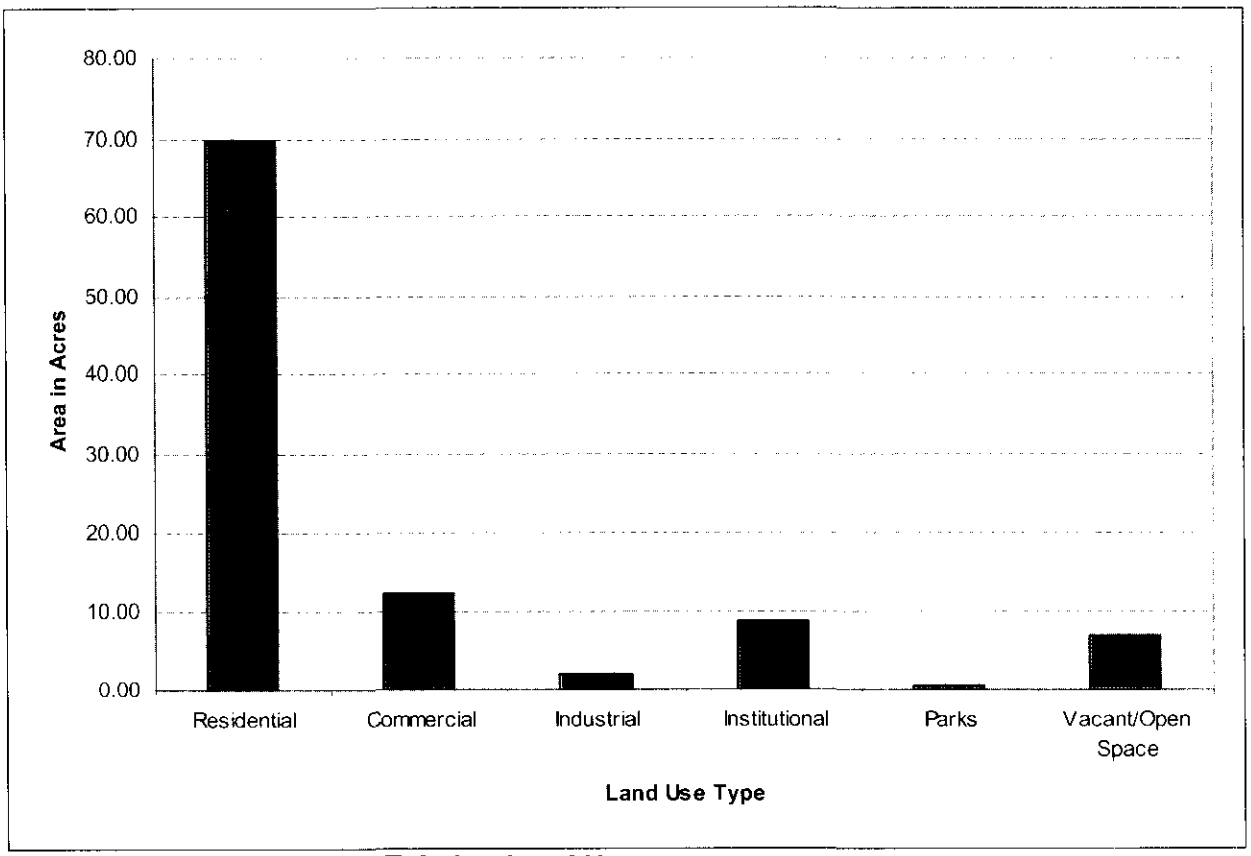


Figure 2-5. G Street Basin Existing Land Use

Telegraph Canyon Basin

The Telegraph Canyon Sewer Basin encompasses the north-central portion of the City, extending from the EastLake development in the east to Interstate 5 in the west. Slightly over half of the basin land use consists of residential development. Existing development ranges from relatively older residential neighborhoods and the urban commercial core west of Interstate 805 to new development in the Rancho Del Rey, EastLake, and Otay Ranch subdivisions in the east constructed within the last 20 years. Buildout of the basin is nearly complete, with only small vacant commercial areas in EastLake remaining. The City is proposing redevelopment of the urban areas surrounding Broadway that may result in significant densification of land uses in the urban core. Existing basin land uses are summarized in Figure 2-6.

Basin sewers generally flow to the Telegraph Canyon Trunk sewer located in Telegraph Canyon Road, Hilltop Drive, and J Street. The trunk sewer ranges in size from 12 to 24 inches in diameter and includes parallel reaches in J Street from Hilltop Drive to Woodlawn Avenue. Flows are conveyed westerly to a connection to the South Metro Interceptor just west of Interstate 5. Basin discharge is metered at the connection by METRO meter station CV-2.

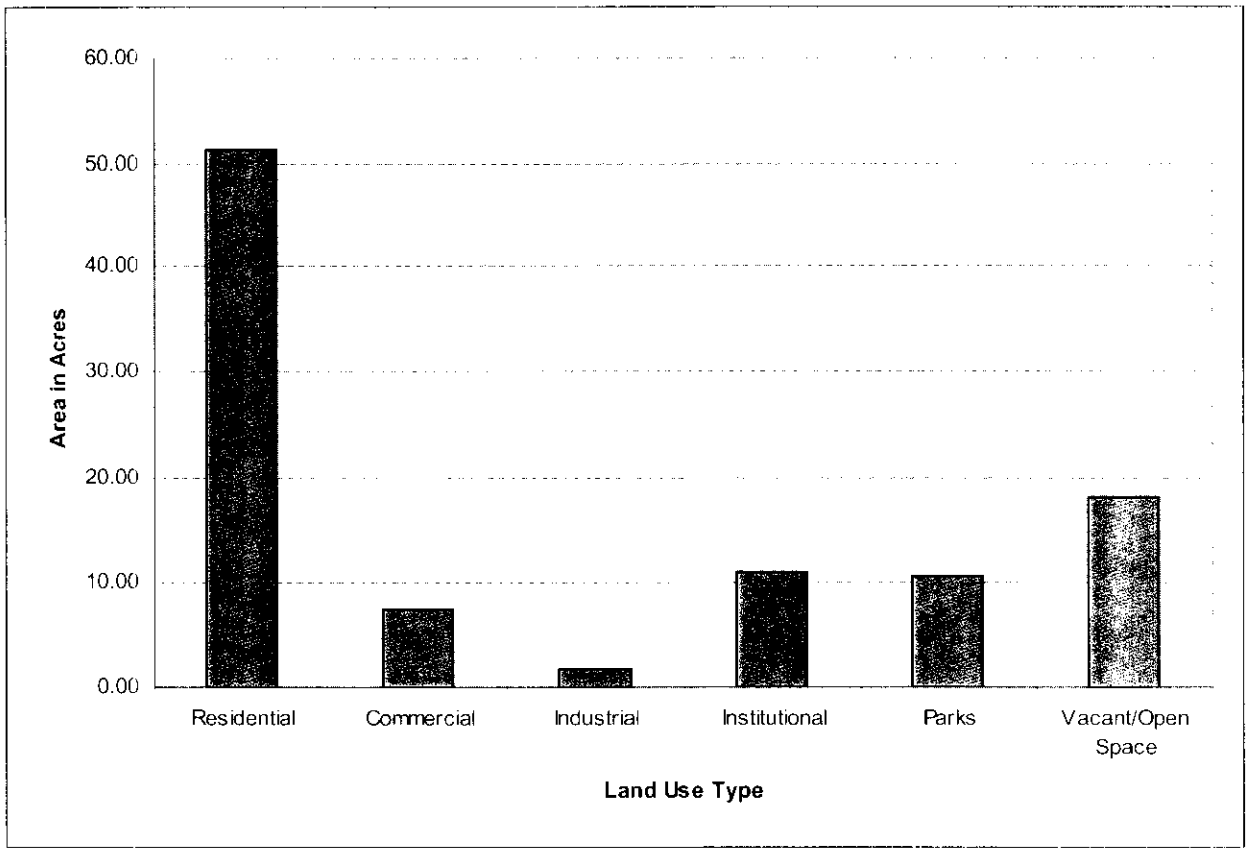


Figure 2-6. Telegraph Basin Existing Land Use

Main Street Basin

The Main Street Sewer Basin generally encompasses the area south of Naples Street and north of Main Street between Interstates 5 and 805 in the southwestern portion of the City. Land uses within the basin are principally residential, with relatively high-density commercial areas surrounding Broadway. The basin is built-out, however, portions of the commercial areas are planned for redevelopment that would increase development density. Existing land uses are shown in Figure 2-7.

Basin sewers generally flow to an 8 to 15-inch diameter sewer main in Oxford Street in the northern portion of the basin and an 8 to 15-inch diameter sewer main in Main Street in the southern portion of the basin. Both of these mains flow westerly and connect to 15 to 30-inch diameter parallel mains in Industrial Boulevard which in turn convey flows southerly to a connection to the South Metro Interceptor west of Interstate 5. Flows are metered upstream of the connection by METRO meter station CV-1 located at Industrial and Louret Avenue.

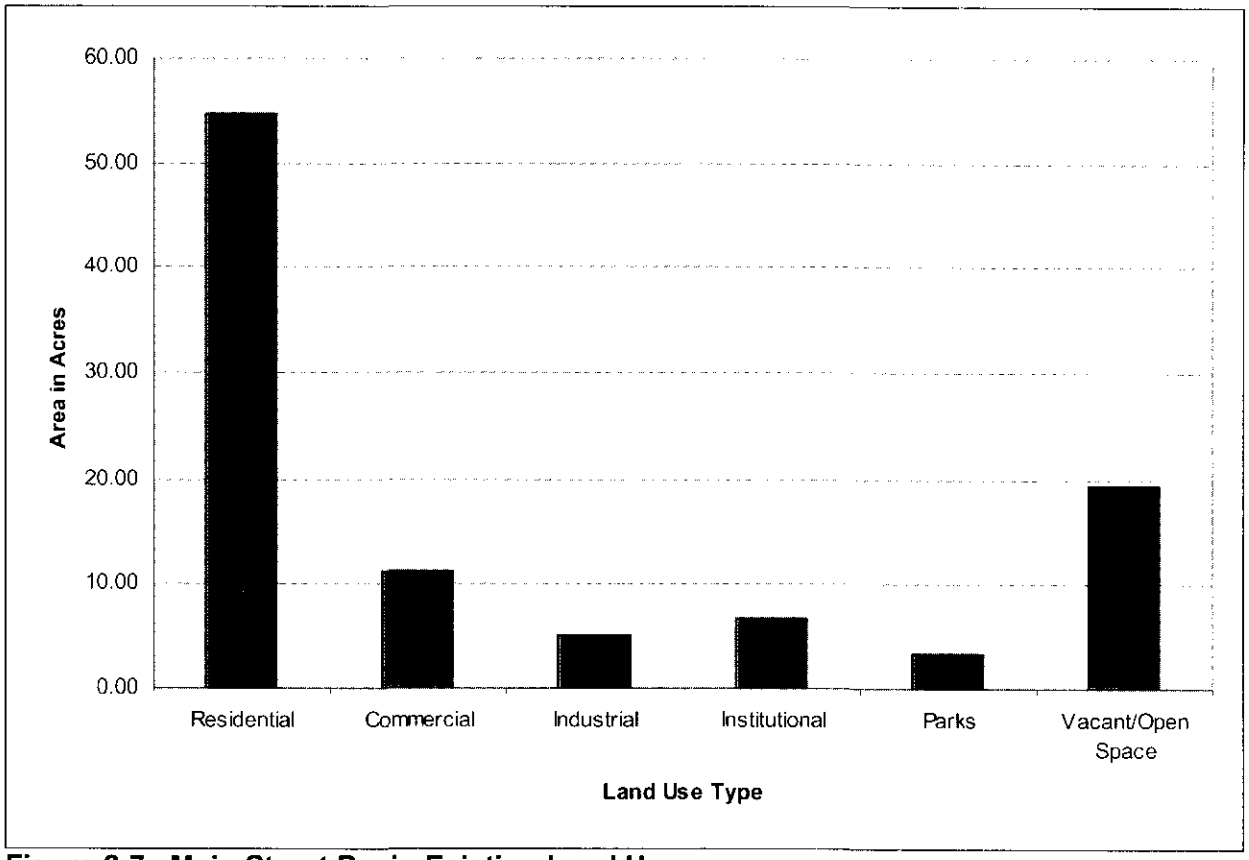


Figure 2-7. Main Street Basin Existing Land Use

Date-Faivre Basin

The Date-Faivre Sewer Basin is located along the southern edge of the City just north of the Otay River Valley and extends from Heritage Road in the east to Industrial Boulevard in the west. The majority of basin development is industrial and commercial land uses, with approximately one-third of the area developed as residential uses. Twenty percent of the basin is vacant or designated open space. Existing land uses are presented in Figure 2-8.

Basin sewers generally drain to a 10 to 18-inch diameter sewer main in Otay Valley Road, Palm Avenue, Valley Avenue, Faivre Street, and Hollister Road. This main conveys flows westerly to a connection to a 27-inch main in Louret Avenue, which ultimately connects to the South Metro Interceptor. Flows are metered upstream of the connection through METRO metering station CV-1.

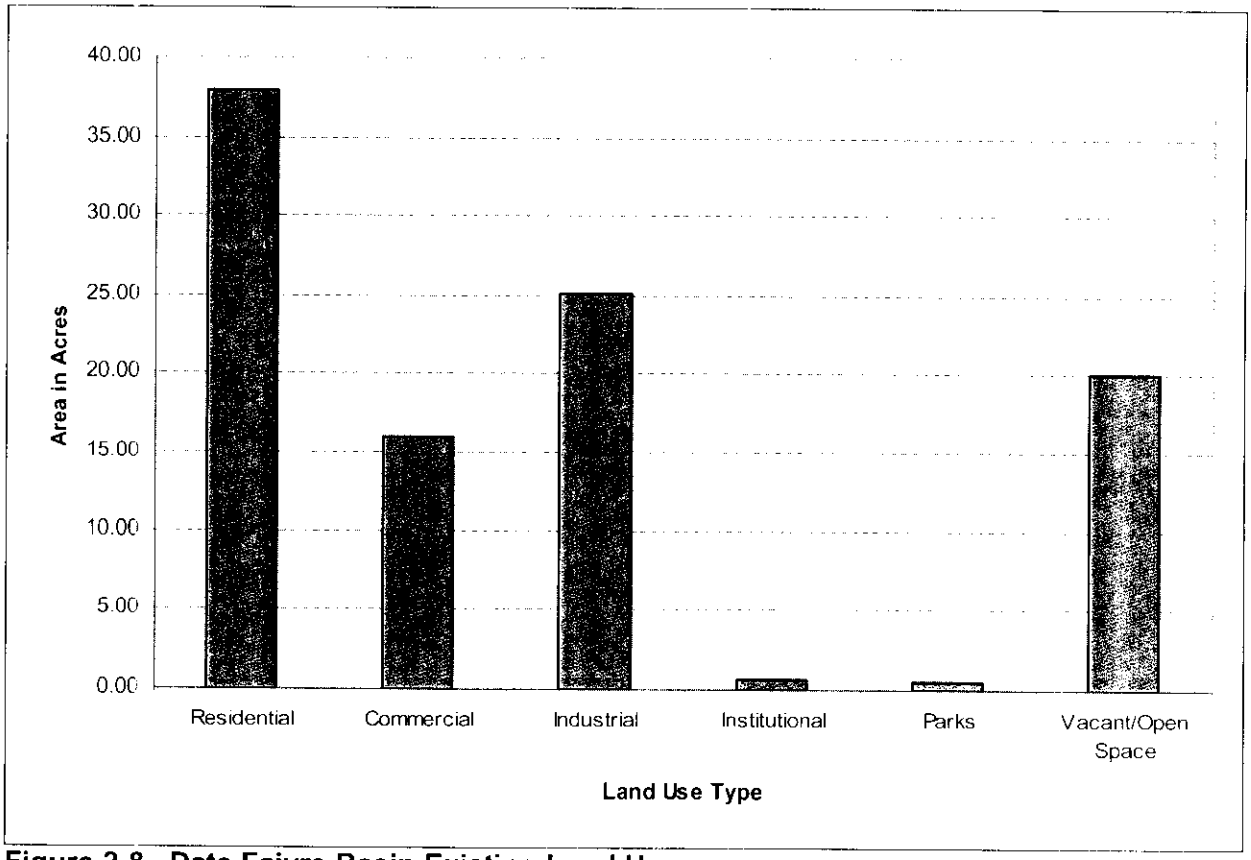


Figure 2-8. Date Faivre Basin Existing Land Use

Sweetwater Basin

The Sweetwater Sewer Basin includes the northern portion of the City bounded by the Telegraph Canyon and G Street Sewer Basins to the south and the unincorporated area of Bonita and the City of National City to the north. The majority of existing development consists of residential land uses with approximately half of the basin currently undeveloped. Figure 2-9 shows the existing land uses.

Basin sewers generally flow to 10 to 20-inch diameter sewer mains in Rice Canyon, Bonita Long Canyon, and in San Miguel Ranch. These mains convey flows northward to connections to the County of San Diego (Spring Valley Sanitation District) Spring Valley Interceptor, which in turn convey the flow westerly to a connection to the South Metro Interceptor near the Interstate 5 crossing of the Sweetwater River. Flows to the Spring Valley Interceptor are metered through eight METRO meter stations, designated CV-5 through CV-12. A limited number of parcels within the basin are served by City sewers that discharge directly (unmetered) to County mains. These flows are approximated by house count formulas for METRO billing purposes.

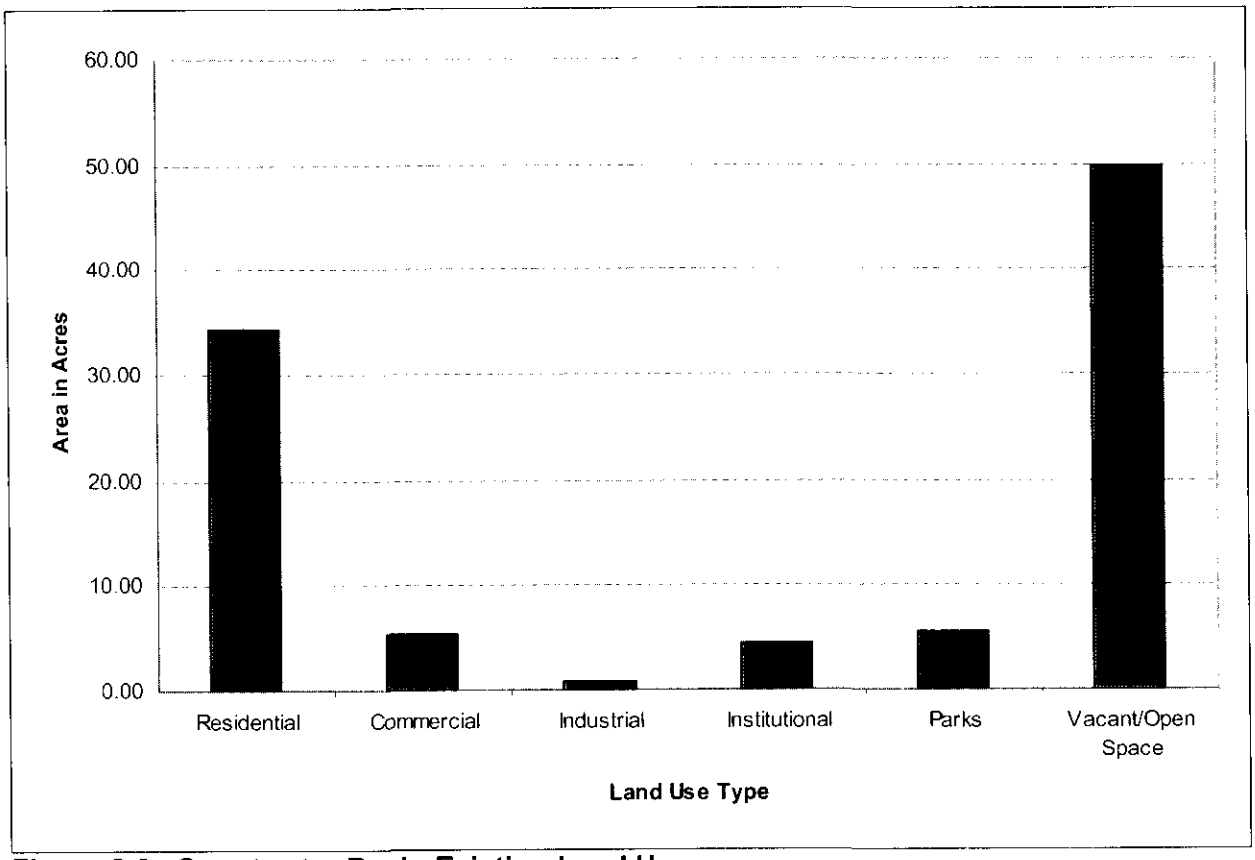


Figure 2-9. Sweetwater Basin Existing Land Use

Poggi Canyon Basin

The Poggi Canyon Sewer Basin includes development within Poggi Canyon located in the east-central portion of the City extending from the EastLake development in the east to just west of Interstate 805 in the west. Existing land use consists principally of recently constructed master-planned residential development within the Sunbow, Otay Ranch, and Eastlake specific planning areas, commercial developments within the Eastlake Terraces, and future developments within the Freeway Commercial Planning Area 12. Buildout of the basin is expected within the next five years. Existing land uses are presented in Figure 2-10.

Basin sewers flow to the 18 to 21-inch diameter Poggi Canyon Interceptor, which conveys flows westerly in Olympic Parkway to Interstate 805 and then southwesterly through open space easements and local roads to a connection to the City's Salt Creek Interceptor in Main Street just west of Melrose Avenue. Flow from the Poggi Canyon and Salt Creek Sewer Basins continue westward in the Salt Creek Interceptor to a new metered connection to the South Metro Interceptor west of Interstate 5.

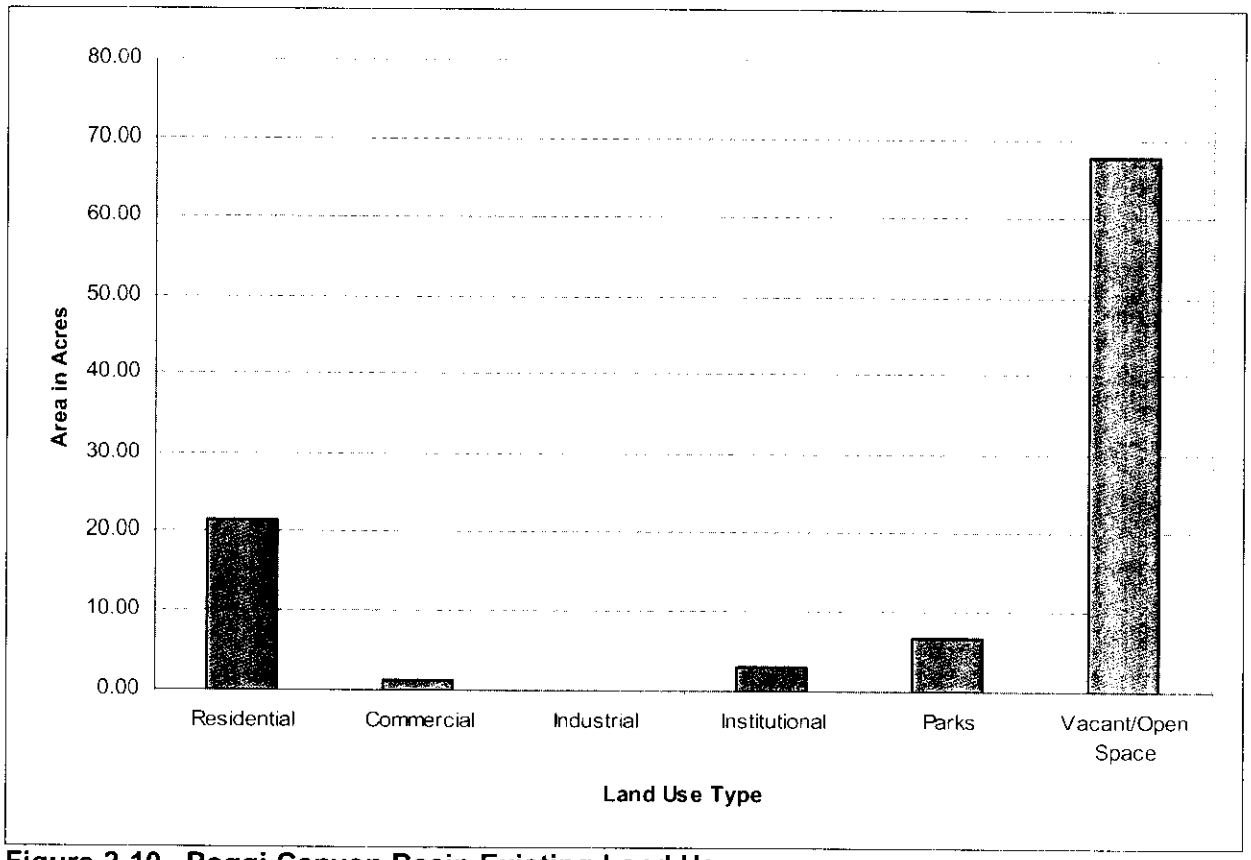


Figure 2-10. Poggi Canyon Basin Existing Land Use

Salt Creek Basin

The Salt Creek Sewer Basin encompasses the eastern and southern portions of the city within the Salt Creek, Wolf Canyon, and Otay River drainage basins. Less than 10 percent of the basin is currently developed, comprised principally of residential land uses in the Rolling Hills Ranch and EastLake subdivisions. Future development will include residential, mixed-use, and industrial development as provided for in the EastLake and Rolling Hills Ranch (formerly Salt Creek Ranch) Specific Plans and the Otay Ranch General Development Plan. Proposed changes to the City's General Plan would increase development density in the basin and may include the addition of university land uses in the southeastern portion of the basin. Buildout of the basin is expected to occur over the next 15 to 20 years. Figure 2-11 shows the existing land uses.

Basin sewers will connect to the 15 to 45-inch diameter Salt Creek Interceptor that generally lies within the Salt Creek and Otay River Valleys. Construction of the Interceptor was completed in 2004. Additionally, a future trunk sewer in the planned Rock Mountain Road, which will connect to the Salt Creek Interceptor east of Heritage Road, will provide conveyance for flows generated within the Wolf Canyon drainage basin. Downstream of the Poggi Canyon Interceptor connection, the Salt Creek Interceptor conveys the combined basin flows to a new metered connection to the South Metro Interceptor west of Interstate 5.

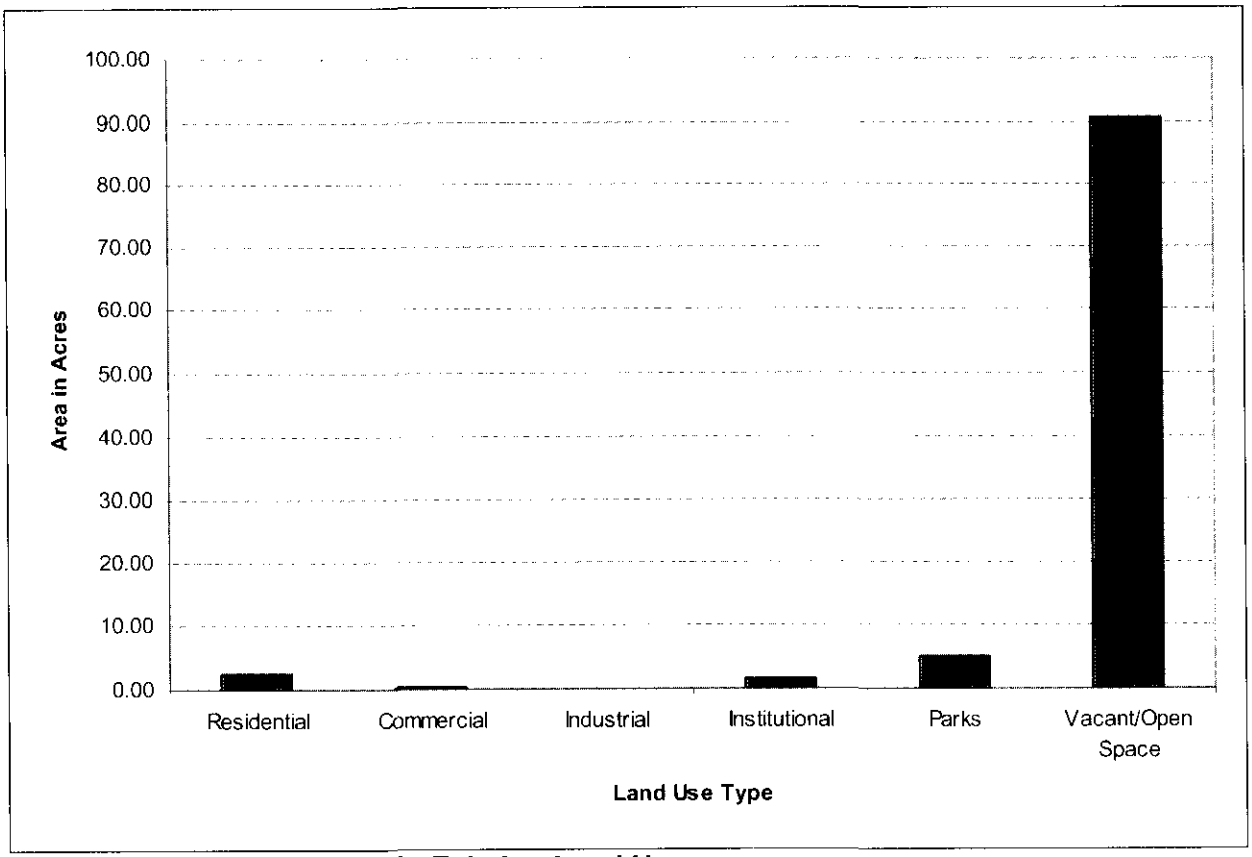


Figure 2-11. Salt Creek Basin Existing Land Use

2.3 REGIONAL SEWERAGE FACILITIES

The City of Chula Vista is a participating agency in the City of San Diego owned and operated METRO system. The system includes regional sewer interceptors and trunk sewers, pump stations, and treatment and disposal facilities. Currently, all wastewater flows generated within City basins excluding the Sweetwater Basin are conveyed by City facilities to connections to the METRO system South Metro Interceptor. Flows generated in the Sweetwater Sewer Basin are conveyed to the County-owned Spring Valley Interceptor that in turn discharges to the South Metro Interceptor. The 72 to 114-inch diameter South Metro Interceptor, conveys flow northward through two pump stations to the Point Loma Wastewater Treatment Plant located at the southern end of the Point Loma peninsula. Currently, the City owns 19.843 mgd capacity in the METRO system.

This page intentionally left blank.